

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SPECIFICATIONS**

SOIL RESISTIVITY METER

DESCRIPTION:

This specification covers the requirements for the soil resistivity meter that will be used for measuring soil resistance.

REQUIREMENTS:

Meter shall be digital, housed in a weather proof IP67 rated hand-held plastic case. The meter and case combined shall not exceed 10lbs.

Must be or have the following:

- The ability to obtain the resistance reading immediately without calculations using a single push button and automatic ranging. Meter cannot utilize adjustment knobs or range selectors.
- A resistance range of 0.01Ω to $10M\Omega$.
- An accuracy for 0.01Ω to $1M\Omega$ range of: $\pm 1.6\%$ ± 1 LS display digit $\pm 0.01\Omega$.
- An accuracy for $1M\Omega$ to $10M\Omega$ range of: $\pm 5\%$ ± 1 LS display digit.
- Allow for quick plug in leads.
- The soil box shall be sized for a conversion factor of 1 so no calculations are necessary and be configured in order for two (2) independent leads to be attached to each end and two (2) independent leads to be attached to the center probes.
- An auto calibration feature which allows the operator to calibrate before each test or on demand.
- Powered by D-cell alkaline batteries. One (1) battery set shall supply a minimum of 10,000 test readings. Rechargeable batteries will not be accepted.
- A crystal-controller 82.2Hz square wave oscillator voltage source.
- An internal ammeter and voltmeter that uses narrow band-pass filters centered at 82.2Hz.

Must come complete with the following:

- One (1) soil box, 270ml capacity (approximately 9.25"L x 2"W x 1.5"H)
- One (1) set of four (4) soil box leads, 4 ft. each, two (2) red and two (2) black
- One (1) copy of the operator's manual and parts list

WARRANTY:

Must include a standard manufacturer warranty on parts and labor.

APPROVED BRANDS/MODELS:

MC Miller Co. model 400D, Humboldt model H-4385D, Gilson model HM-944, or equal.